

PH01-00-01 C1(Wagener)
09/691,812

REMARKS

Claims 1-87 are pending in this application, claims 1, 36, 44, 55 and 66 being the independent claim.

The indication of allowability of claims 16, 18-20, 24, 56, 75, and 78-79 is gratefully acknowledged. However, these claims have not been rewritten in independent form at this time because Applicants believe that the independent claims are patentable over the cited references.

Claims 1-15, 17, 21-23, 25-35, 36-43, 44-54, 55, 57-63, 66-72, 74, 76-77 and 80-81 stand rejected under 35 U.S.C. 102(e) as being anticipated by Weverka et al., U.S. Patent No. 6,501,877. In addition, claims 64-65, 73 and 82-87 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Weverka et al. These rejections are hereby traversed for at least the following reasons.

In accordance with the present invention as set forth in claim 1, an optical switch is provided which includes a plurality of input/output ports for receiving one or more wavelength component(s) of an optical signal. The optical switch also includes an optical arrangement that directs the wavelength component to any given one of the plurality of input/output ports. The given input/output port may be selected from among any of the plurality of input/output ports. Thus, the inventive optical switch, in one particular configuration, has the capability to use the same port as both the input port in which a wavelength component is received and the output port through which it is directed.

Weverka et al. relates to a wavelength router that selectively directs wavelengths received at an input port to a desired output port. In the router depicted in FIGs. 1(a)-1(c) of the reference, for example, the wavelengths are selectively directed between input port 12 and output ports 15. In operation, each wavelength is collimated by a lens 20, encounters a reflective diffraction grating 25 and leaves the grating 25 at a wavelength-dependent angle. The wavelengths are then respectively focused onto one of the retroreflectors 30, which spatially displace the wavelengths by a desired amount determined by the retroreflectors. The wavelengths are then collimated again by lens 20 and encounter the grating 25 again so that the grating undoes the previous dispersion. The wavelengths are then focused onto the output port that corresponds to the spatial displacement imposed by the retroreflector.

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In effect, the router in FIG. 1 of Weverka et al. uses a retroreflector to convert a difference in wavelength into a spatial displacement. Moreover, the remaining examples of the Weverka et al. device all use a similar arrangement to convert a wavelength differential into a spatial displacement. The retroreflector that is employed may be a prism, such as prisms 30a and 30b shown in FIGS. 4(a) and 4(b), respectively.

One important consequence of Weverka et al.'s use of a retroreflector is that it is not possible to use the same port as both the input port in which a wavelength component is received and the output port through which it is directed, since in such a case, no spatial displacement arises (It should be noted, however, that Weverka et al.'s device can direct a wavelength from any given port to any other port. That is, in Weverka et al., once a port is selected as the input port, the remaining ports may all be treated as potential output ports.) Accordingly, the wavelength router of Weverka et al. cannot provide the functionality achievable by the present invention. As previously noted, this enhanced functionality is reflected in claim 1 by reciting *an optical arrangement that directs the wavelength component to any given one of the plurality of input/output ports, the given input/output port being variably selectable from among any of the plurality of input/output ports.*

Accordingly, for at least the reason presented above it is respectfully requested that the rejection of independent claim 1 and claims 2-15, 17 and 21-23, which depend from and further define the invention of claim 1, under 35 U.S.C. 102(e) be reconsidered and withdrawn. Moreover, the remaining independent claims are also believed to be allowable for at least the same reason as claim 1, and therefore the rejection of independent claims 36, 44, 55 and 66 under 35 U.S.C. 102(e) should also be reconsidered and withdrawn. Likewise, the rejection of the remaining dependent claims, which depend from and further define the invention of claims 36, 44, 55 and 66, under 35 U.S.C. 102(e) or 103(a) should also be reconsidered and withdrawn.

CONCLUSION

In view of the foregoing, it is believed that the application is now in condition for allowance and early passage of this case to issue is respectfully requested. If the

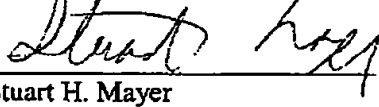
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Examiner believes there are still unresolved issues, a telephone call to the undersigned would be welcomed.

FEES

If there are any fees due and owing in respect to this amendment, the Examiner is authorized to charge such fees to deposit account number 50-1047.

Respectfully submitted,


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